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SYSTEM FOR FORMING A SEMICONDUCTOR DEVICE AND METHOD THEREOF

ABSTRACT OF THE DISCLOSURE

A method for fabricating sidewall spacers in the manufacture of an integrated circuit device is disclosed. A dielectric spacer layer is formed over the semiconductor substrate. The dielectric spacer layer is etched prior to forming a layer subsequent to the dielectric layer, to form an L-shaped spacer. In another embodiment, a structure is formed on a substrate, the structure having a sidewall portion that is substantially orthogonal to a surface of the substrate. A dielectric layer is formed over the substrate. A spacer is formed over a portion of the dielectric layer and adjacent to the sidewall portion of the structure, wherein at least a portion of the dielectric layer over the substrate without an overlying oxide spacer is an unprotected portion of the dielectric. At least a part of the unprotected portion of the dielectric layer is removed. An intermediate source-drain region can be formed beneath a portion of the L-shaped spacer by controlling the thickness and/or the source drain doping 15 levels.